

03040201-070

(Crooked Creek)

General Description

Watershed 03040201-070 (formerly 03040201-072) is located in Marlboro County and consists primarily of **Crooked Creek** and its tributaries. The watershed occupies 42,737 acres of the Sandhills and Upper Coastal Plain regions of South Carolina. The predominant soil types consist of an association of the Norfolk-Wagram-Rutledge series. The erodibility of the soil (K) averages 0.17; the slope of the terrain averages 5%, with a range of 0-10%. Land use/land cover in the watershed includes: 34.4% scrub/shrub land, 32.4% agricultural land, 15.9% forested land, 6.9% forested wetland (swamp), 5.7% urban land, 4.3% water, and 0.4% barren land.

Crooked Creek accepts drainage from Lightwood Knot Creek and Usher Pond before flowing through Goodwins Pond and Burnt Factory Lake. Crooked Creek then receives drainage from Beverly Creek and Lily Quick Creek before flowing through Lake Paul Wallace and McCalls Millpond near the City of Bennettsville. The Crooked Creek Watershed drains into the Pee Dee River. There are several lakes (totaling 730.0 acres) in this watershed and a total of 62.3 stream miles, all classified FW.

Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
PD-107	S	FW	CROOKED CREEK AT SC 9 IN BENNETTSVILLE
PD-014	S	FW	CROOKED CREEK AT S-35-43
PD-063	W	FW	CROOKED CREEK AT SC 912

Crooked Creek - There are three monitoring sites along Crooked Creek. This is a blackwater system, which are often characterized by naturally low pH and dissolved oxygen concentrations. Aquatic life uses are fully supported at the furthest upstream site (**PD-107**). Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. There is a significant increasing trend in pH. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter. Recreational uses are partially supported due to fecal coliform bacteria excursions.

At the next site downstream (**PD-014**), aquatic life uses are also fully supported. Although pH and dissolved oxygen excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations. There is a significant increasing trend in pH. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter. Recreational uses are fully supported and a significant decreasing trend in fecal coliform bacteria concentration suggests improving conditions for this parameter.

Aquatic life and recreational uses are fully supported at the downstream site (**PD-063**). Although pH excursions occurred, they were typical of values seen in blackwater systems and were considered natural, not standards violations.

Lake Paul Wallace - Lake Paul Wallace is a 416-acre divided impoundment on Crooked Creek, with a maximum depth of approximately 14 feet (4.3 meters) and an average depth of approximately four feet (1.2 meters). Lake Wallace's watershed comprises 42 square miles (109 km²) in North and South Carolina. An embankment isolates the fishing lake from the swimming lake, which conveys the flow from Crooked Creek. Lake Wallace was treated with aquatic herbicides in 1989, 1992, and 1994 to control aquatic plants and provide access for swimming and boating. In addition, 800 grass carp (26/acre) were stocked in 1994 to decrease the plant population. The stocking and herbicide treatments were successful and no additional treatments have been necessary.

NPDES Program

Active NPDES Facilities

RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD) COMMENT	NPDES# TYPE LIMITATION
CROOKED CREEK CITY OF BENNETTSVILLE WWTP PIPE #: 001 FLOW: 3.9 PIPE #: 001 FLOW: 5.0 , 6.0 (PROPOSED) WQL FOR DO,TRC,NH3N,BOD5	SC0025178 MAJOR DOMESTIC WATER QUALITY WATER QUALITY
CROOKED CREEK BECKER MINERALS, INC./MARLBORO PLT PIPE #: 001 FLOW: M/R	SC0027219 MINOR INDUSTRIAL EFFLUENT

Nonpoint Source Management Program

Mining Activities

MINING COMPANY MINE NAME	PERMIT # MINERAL
MARLBORO COUNTY MARLBORO COUNTY PIT	0280-69 SAND/CLAY
BECKER SAND & GRAVEL CO. MARLBORO PLANT	0095-69 SAND/GRAVEL

Water Supply

WATER USER (TYPE) STREAM	REGULATED CAPACITY (MGD) PUMPING CAPACITY (MGD)
CITY OF BENNETTSVILLE (M)	4.00
LAKE WALLACE	6.00

Growth Potential

There is a low to moderate potential for growth in this watershed, which contains the majority of the City of Bennettsville. Water and sewer services are available in and around Bennettsville and should encourage growth. S.C. Hwy. 9 crosses the watershed, and commercial growth is expected along this corridor.